

REMARKS AND ARGUMENTS:

The specification was amended in paragraph [00082] to correct a typographical error.

Claims 6 and 7 have been cancelled without prejudice.

Claims 1 and 8 have been amended.

Claim 1 has been amended by incorporating the features formerly described in claim 7, which has been canceled, and to clarify transition language.

Claim 8 has been amended to restore the terms, "and mixtures thereof", which appeared in claim 8 as originally filed, but which had been omitted in error.

Claims 21 – 58 stand withdrawn.

Claims 1 – 5 and 8 - 58 remain in the case.

No new matter has been added.

Election/Restriction comments:

The Office's comments regarding election and inventorship are noted.

Claim interpretation:

The Office's comments regarding election and inventorship are noted without acknowledgement of their correctness or accuracy. The Applicant reserves the right to disagree with the Office's interpretation of the claims at any time during the prosecution of this application.

Objection to claim 6 as being of improper dependent form for failing to further limit the subject matter of a previous claim.

In order to facilitate prosecution of the case, claim 6 has been cancelled without prejudice to its patentability. The cancellation is not meant as, nor should it be construed to be, agreement with the conclusions of the Office with regard to the patentability of the subject matter of the claim.

Rejection of claims 1 – 20 under 35 USC §112, second paragraph, as being indefinite.

It is respectfully requested that the rejection of claims 1 – 20 under 35 USC §112, second paragraph, as being indefinite be reconsidered for the reasons given below and

be withdrawn. The Office argued that it is unclear whether the “flocculant and/or coagulant” is intended to modify or define the function of the polyarylamine polymer or is a further ingredient. The Office points to claim 20, where melamine formaldehyde is claimed as a flocculant.

The “flocculant and/or coagulant” of claim 1 is an element of the composition that is in addition to the polyarylamine. This feature is described in the original specification at least at paragraph [00055]. As to the use of a melamine formaldehyde polymer as the flocculant or coagulant, as described in claim 20, ample support is provided for this feature in the original specification and claims, and the Applicant can see no reason why the use of such a polymer would violate the requirements of 35 USC §112, second paragraph, since the properties of such a compound meet the requirements of serving as a flocculant or a coagulant.

The Office has also argued that it is unclear whether the detackifying compositions claimed are an “aqueous mixture” set forth in line 2 of claim 1 or said “aqueous mixture” refers to the “detackifying paint in an aqueous system comprising an aqueous mixture”.

Claim 1 has been amended to clarify that the claimed composition is an aqueous mixture which comprises a flocculant and/or a coagulant and a particular polyarylamine polymer -- namely, the polyarylamine polymer that results from the reaction that is described. It is believed that this amendment clarifies the issues raised by the Office.

In claims 17, 18 and 19, the Office has argued that the ratio of the amine modifier:arylamine is unclear when the amine modifier and the arylamine are the same compound, such as melamine, for example.

In paragraph [00025] of the specification, it is clearly stated that “...the properties of the polyarylamine polymer can be modified by the inclusion of an amine that is in addition to, and is different than, the arylamine as a reactant in the polymerization reaction.” And, “...such an optional additional amine can be referred to as an “amine modifier”.” (underline added for emphasis). Because the amine modifier is clearly identified as being in addition to and different than the arylamine, it is respectfully maintained that there would be no lack of clarity whatsoever regarding the ratios described in claims 17, 18 and 19, and the reconsideration and withdrawal of the present objection is respectfully requested.

In claim 5, the Office has argued that it is unclear how a hexamethylenetetramine

is an aldehyde releasing agent.

As to the question by the Office as to whether hexamethylenetetramine is an aldehyde-releasing agent, the Applicant wishes to point out the statement, found in McDonnell *et al.*, *Clin Microbiol Rev.*, 12(1):147 – 179 (1999), to the effect that:

“ Formaldehyde-releasing agents. Several formaldehyde-releasing agents have been used in the treatment of peritonitis (226, 273). They include noxythiolin (oxymethylenethiourea), tauroline (a condensate of two molecules of the aminosulponic acid taurine with three molecules of formaldehyde), hexamine (hexamethylenetetramine, methenamine), the resins melamine and urea formaldehydes, and imidazolone derivatives such as dantoin.” (underlining added for emphasis)

The citations 226 and 273 are given as: (226) .Hugo, W. B., and A. D. Russell. Types of antimicrobial agents. In A. D. Russell, W. B. Hugo, and G. A. J. Ayliffe (ed.), Principles and practice of disinfection, preservation and sterilization, 3rd ed., in press. Blackwell Science, Oxford, England, and (273).Lambert P A, Hammond S M. Potassium fluxes. First indications of membrane damage in microorganisms. Biochem Biophys Res Commun. 1973;54:796–799. Other references that show the release of formaldehyde from the reaction of hexamethylenetetramine and an acid are found in *Synthesis*, p. 161 (1979), and *J. Organic Chemistry*, 44:1678 (1979).

It is maintained, therefore, that hexamethylenetetramine was known in the art as an aldehyde-releasing agent at the time of the present invention.

The Office also argues that claim 7 contains an improper alternative grouping because it is unclear what the term “its” refers to in the penultimate line of the claim. Also, the claim contains multiple uses of the term “and. Claim 8, the Office has pointed out, lacks a conjunction.

The subject matter of claim 7 has been incorporated into claim 1, and claim 7 has been canceled. Claim 8 has been amended to correct the language of the claim as pointed out by the Office.

Rejection of claims 1 – 12 and 14 – 20 under 35 USC §102(b) over U.S. Patent No. 4,422,944 to Selvarajan *et al.*

It is respectfully requested that the rejection of claims 1 – 12 and 14 – 20 under 35 USC §102(b) over U.S. Patent No. 4,422,944 to Selvarajan *et al.* be reconsidered for the reasons discussed below and be withdrawn.

The Office has rejected claims 1 – 12 and 14 – 20 as anticipated by U.S. Patent No. 4,422,944 to Selvarajan *et al.*, and has argued that example 3 of Selvarajan teaches all elements of the rejected claims, including the ratio of aldehyde:arylamine used for the formation of the polyarylamine. However, the Office goes on to argue that the aniline/hexamethylenediamine/formaldehyde polymers that are formed also fulfill the role of the “floculant and/or a coagulant” that is also required in the claimed composition.

With respect, the Applicant maintains that the polymer described by Selvarajan *et al.* cannot fulfill both roles because claim 1, which states, “comprising a flocculant and/or a coagulant and a polyarylamine polymer”, when read in light of paragraph [0055], requires that the flocculant and/or coagulant is different than and in addition to the polyarylamine. In particular, paragraph [00055] states that “[w]hen the subject polyarylamine is added to the aqueous liquid, it can be used alone, or it can be used in conjunction with other, known, materials, such as cationic or anionic coagulants, organic or inorganic coagulants, metal salts, metal hydroxides, organic flocculants ...”. (underline added for emphasis). The Applicant maintains that the polymer described by Selvarajan *et al.* cannot fulfill the role of both the flocculant and/or coagulant as well as the polyarylamine polymer. Consequently, the publication fails to teach all elements of the amended claims and that the rejection should be withdrawn.

Rejection of claims 1 – 6 and 10 – 20 under 35 USC §102(b) as anticipated by, or in the alternative, under 35 USC §103(a) as obvious over U.S. Patent No. 5,240,509 to Rey *et al.*

It is respectfully requested that the rejection of claims 1 – 6 and 10 – 20 under 35 USC §102(b) as anticipated by, or in the alternative, under 35 USC §103(a) as obvious over U.S. Patent No. 5,240,509 to Rey *et al.* be reconsidered for the reasons discussed below and be withdrawn.

The Office has rejected claims 1 – 6 and 10 – 20 as being anticipated by or obvious over U.S. Patent No. 5,240,509 to Rey *et al.* The Rey patent describes paint detackification by using a melamine/formaldehyde polymer in conjunction with an aluminum salt. Other polymeric flocculants can also be added.

Claim 1 has been amended by describing the arylamine reactant as being selected from a list of specific arylamines that were formerly described in claim 7, which has been cancelled. Because Rey *et al.* does not teach or suggest the use of any arylamine other than melamine, which is not included in the useful arylamines of claim 1, it cannot teach the invention as claimed. Moreover, because the structure of melamine (a triamino triazine) is significantly different from the anilines, phenylenediamines, and amino phenols required in the present invention, one of ordinary skill in the art would have no reason to expect that the substitution of one of those compounds for the melamine required in Rey *et al.* would result in a successful treating agent for contaminated spray booth waters. Without a suggestion to make this modification of the Rey *et al.* melamine polymer, the Rey *et al.* reference cannot be argued to make the present claims obvious.

Accordingly, it is respectfully requested that the present ground of rejection be reconsidered and be withdrawn.

Request for reconsideration:

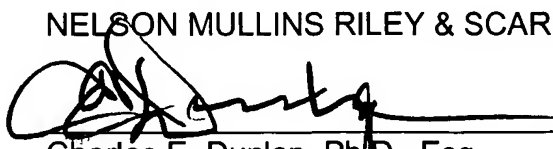
It is respectfully requested that the claims be re-examined in view of the amendments to the claims that are described above and be found to be allowable. If one or all of the claims are deemed to not be allowable, the Examiner is invited to call the undersigned attorney at the number given below for resolution of any remaining issues.

Respectfully requested,

NELSON MULLINS RILEY & SCARBOROUGH, LLP

July 21, 2006

Date



Charles E. Dunlap, Ph.D., Esq.
Registration No. 35,124
1320 Main Street, 17th Floor
Columbia, SC 29201

Telephone: (864) 250-2238
Facsimile: (864) 250-2394
Customer No.: 27530